



**Massachusetts
Institute of
Technology**

HAITIAN CREOLE AT THE SYNTAX-PHONOLOGY INTERFACE

RETHINKING THE *KI/KE* ALTERNATION

CHRISTOPHER LEGERME

What's Ahead

- What is *ki/ke* in Haitian Creole?
 - Comp-trace effects



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- What is *ki/ke* in Haitian Creole?
 - Comp-trace effects
- Previous work on *ki/ke*
 - Agree
 - Antilocality



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- What is *ki/ke* in Haitian Creole?
 - Comp-trace effects
- Previous work on *ki/ke*
 - Agree
 - Antilocality
- Phonological Analysis of *ki/ke*
 - Overt Subject Requirement



Is *ki* a *that*-trace?

- Haitian Creole (HC) *ki/ke* is crucial domain for examining subject/object asymmetries in morphosyntactic dependencies (Takahashi and Gračanin-Yuksek 2008)

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Kiyès ki te wè Malis?

Who COMP PST see Malis

Who saw Malis?

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b. Object Extraction

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Who did Malis see?

Is *ki* a *that*-trace?

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Qui (est-ce qui) a vu Malis ?

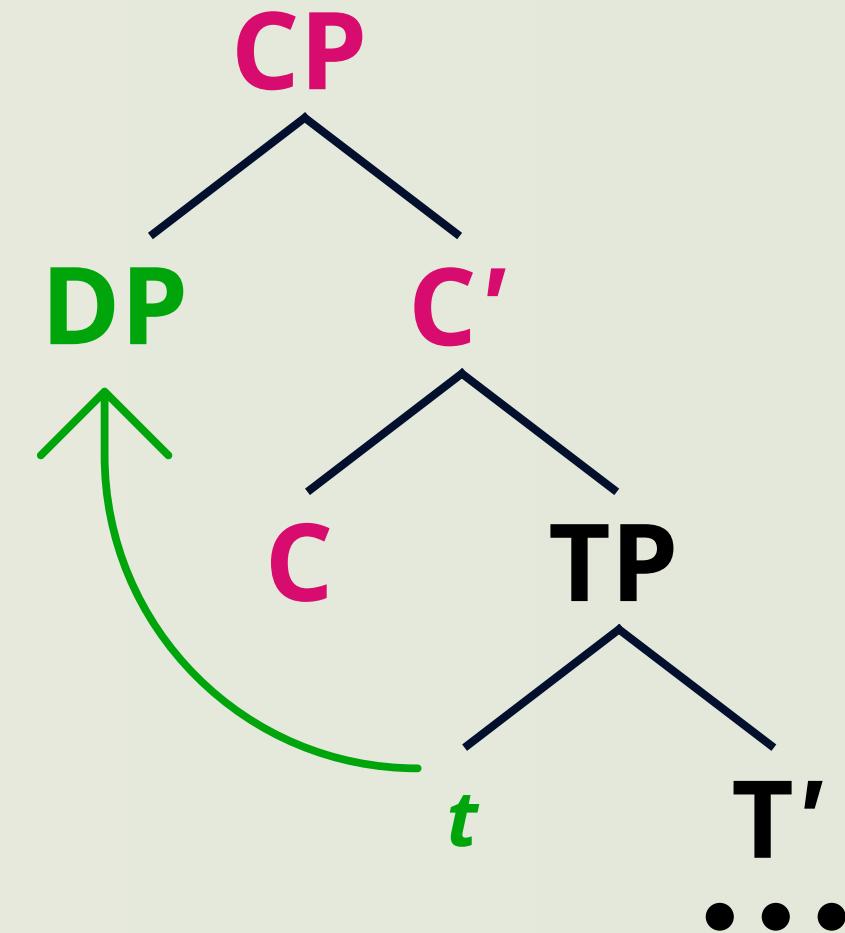
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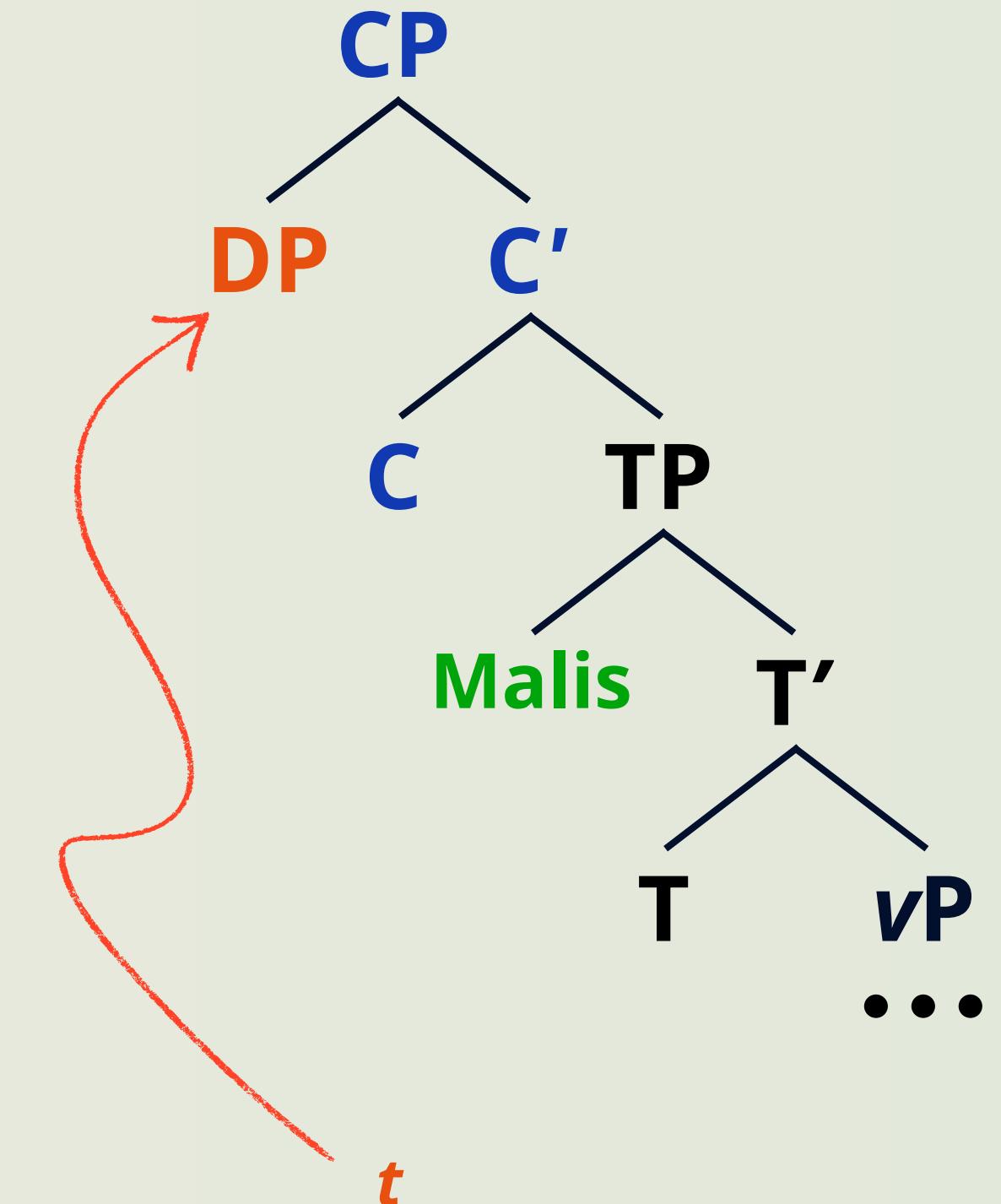
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...but is *ki* a *that*-trace?

- In English, the ***that*-trace effect** prohibits the extraction of an embedded subject when the complementizer *that* is overtly realized

(2) English *that*-trace effect (Perlmutter 1968: 214)

- Who did he say [CP (****that***) __ hid the rutabaga]?
- What did he say [CP (***that***) Laura hid __]?

...but is *ki* a *that*-trace?

- The **comp-trace effect** prohibits the extraction of an embedded subject when the complementizer is overtly realized

(3) Comp-trace in Levantine Arabic (Kenstowicz 1989: 264)

- a. **?ayy** **bint** Fariid kaal [CP (***innu**) **t** ištarat l-fuṣṭaan]?
Which girl Fariid said COMP bought the-dress
“Which girl did Fariid say bought the dress?”
- b. **?ayy** **fuṣṭaan** Fariid kaal [CP (innu) l-bint ištarat **t**]?
Which dress Fariid said COMP the-girl bought
“Which dress did Fariid say that the girl bought?”

...but is *ki* a *that*-trace?

- The ***comp*-trace effect** prohibits the extraction of an embedded subject when the complementizer is **overtly** realized

...but is *ki* a *that*-trace?

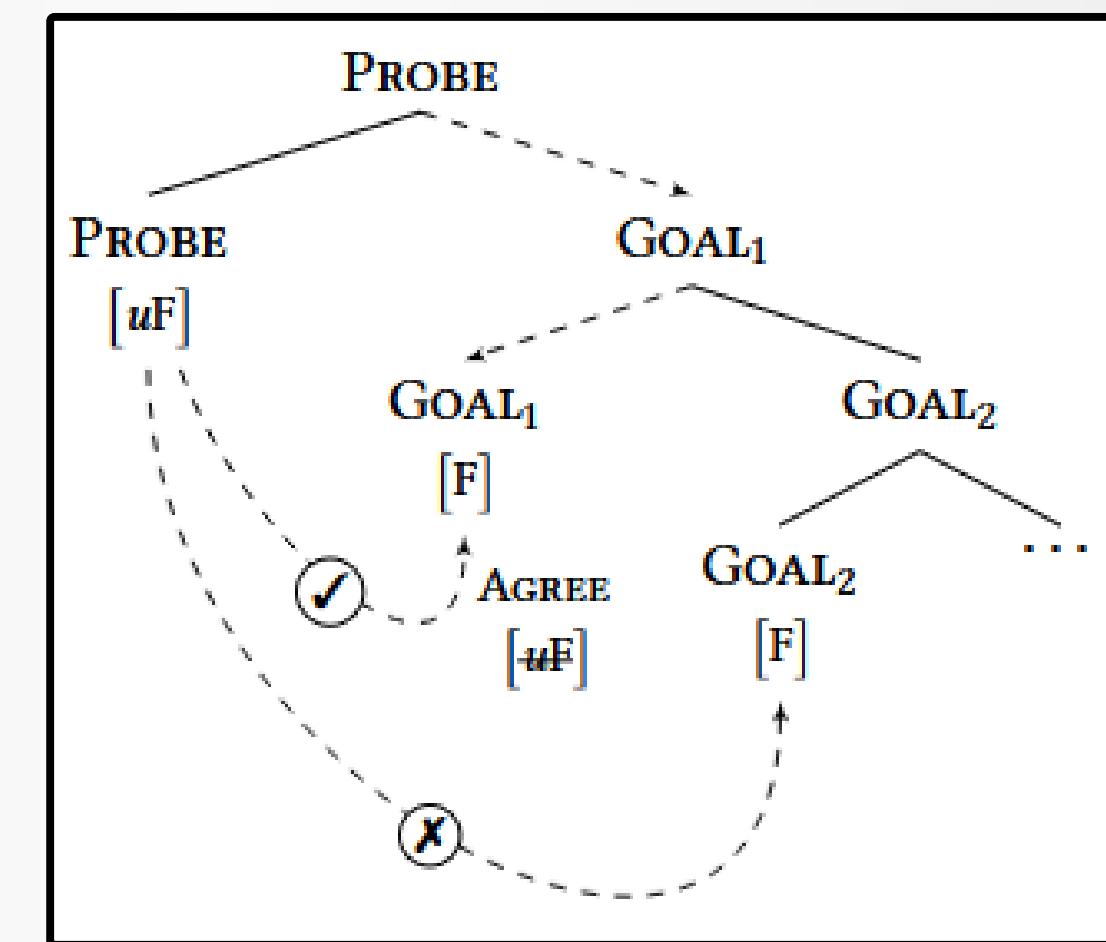
- The **comp-trace effect** prohibits the extraction of an embedded subject when the complementizer is **overtly** realized
- ❓ What about languages where different overt forms of the complementizer are used, like in Haitian Creole or French

Agree

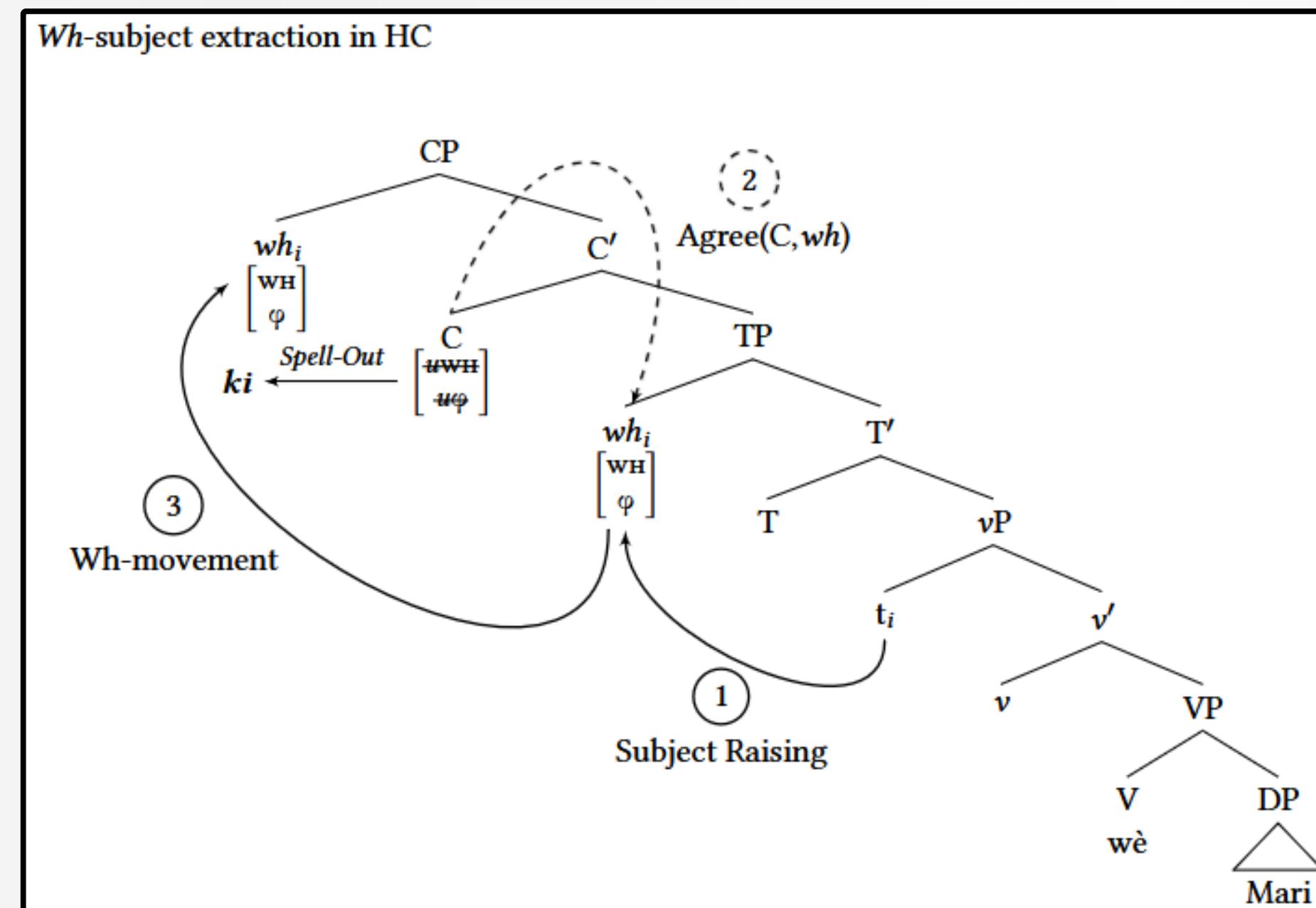
Following closely after Carstens's (2003) analysis of **Complementizer Agreement** and Chomsky's (2000, 2001) probe-goal agreement, Takahashi and Gračanin-Yuksek (2008) argue that **C has its own set of unvalued ϕ -features** that can enter into an **agreement relation** with a local DP bearing corresponding valued ϕ -features features

Agree

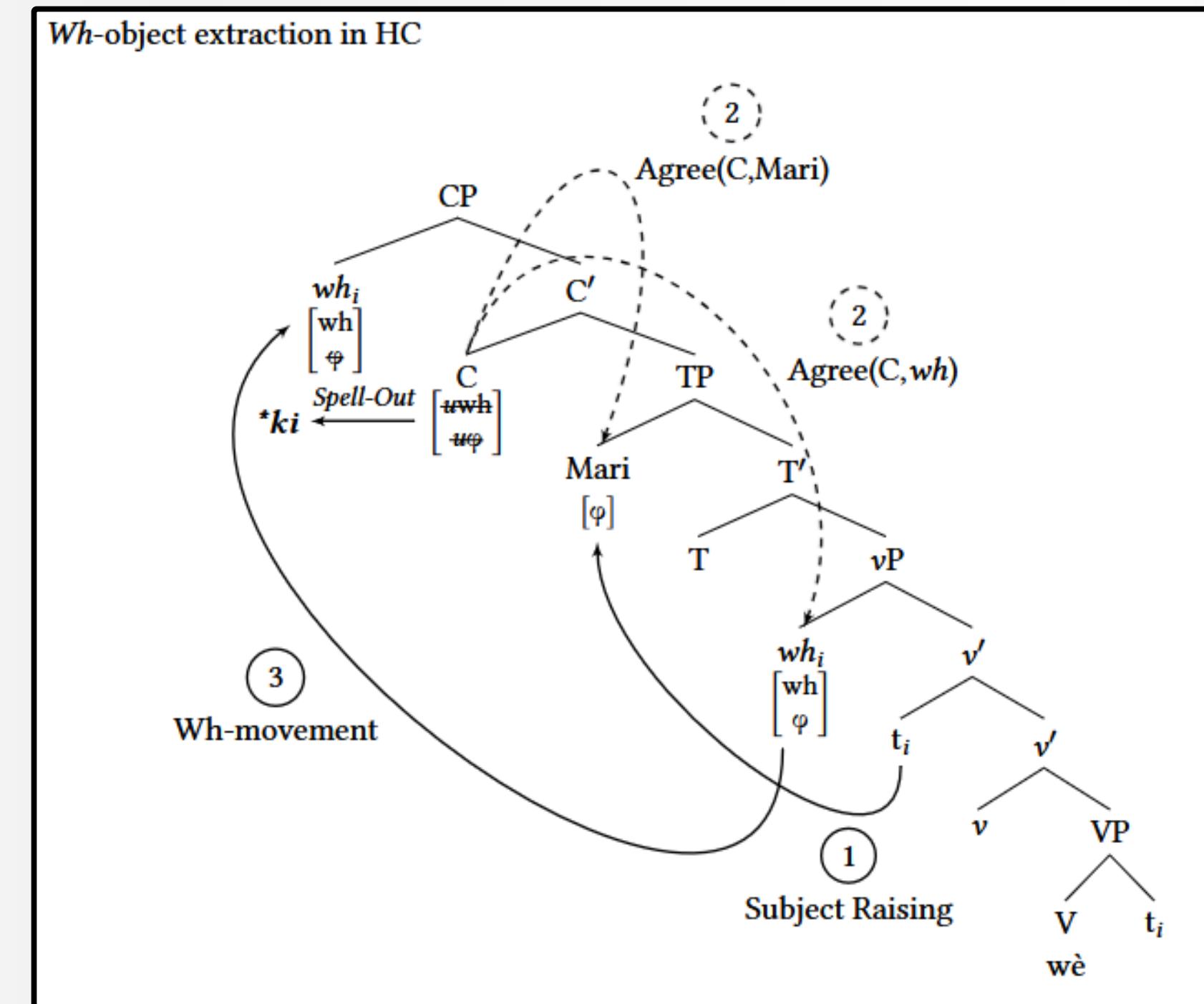
- The operation AGREE establishes a syntactic dependency between features in order for successful communication with the interfaces
 - A *probe* matches with *goal* within a local syntactic configuration constrained by **c-command** (Chomsky, 2001)



Takahashi and Gračanin-Yuksek (2008) argue that when a subject *wh*-phrase is extracted, both the unvalued *wh*-feature and unvalued ϕ -features on C can be checked by a single goal, that is, the subject *wh*-phrase in SpecTP



... for object extraction, the unvalued features on C are checked by different goal



- Why a “split” Agree analysis?

- Flexible and elegant way of capturing crosslinguistic variation without positing parametric differences in UG
- Variation emerges from the interaction of universal operations (e.g., Merge, Agree) constrained by third factor principles of computational efficiency (Chomsky 2005)
- Minimalist “under-specification of rule ordering in narrow syntax” (Sugimoto and Pires, 2022:63)

Baptista and Obata (2015) argue that in Cape Verdean Creole (CVC) subject-raising occurs after C probing, since we get the realization of *ki* with both subject and object extraction

(4) a. CVC Subject Extraction (Obata et al. 2015: 5)

Kenhi ki odja João?

Who COMP see João

Who saw João?

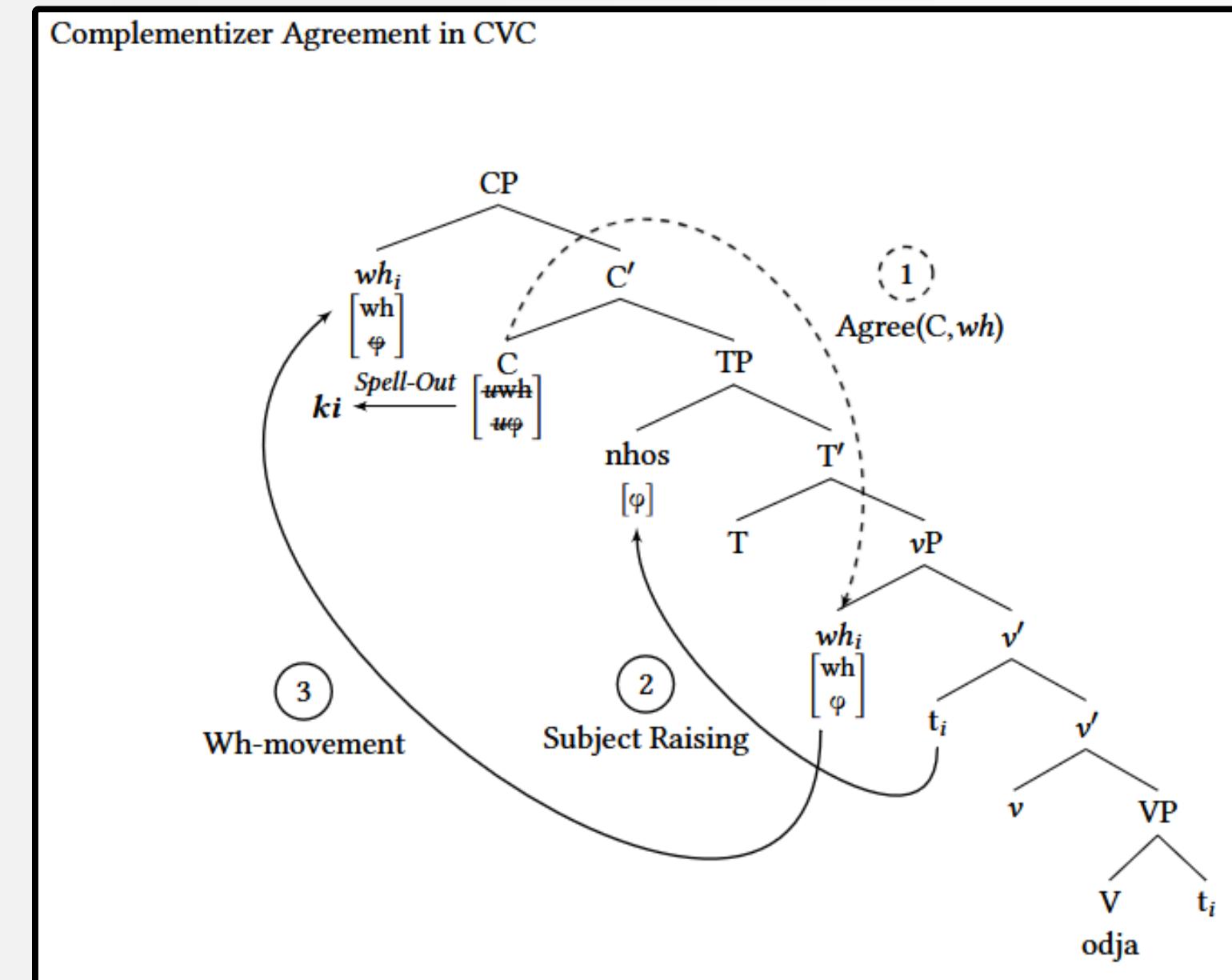
b. CVC Object Extraction (Obata et al. 2015: 6)

Kuze ki nhos odja?

Who COMP you see

Who did you see?

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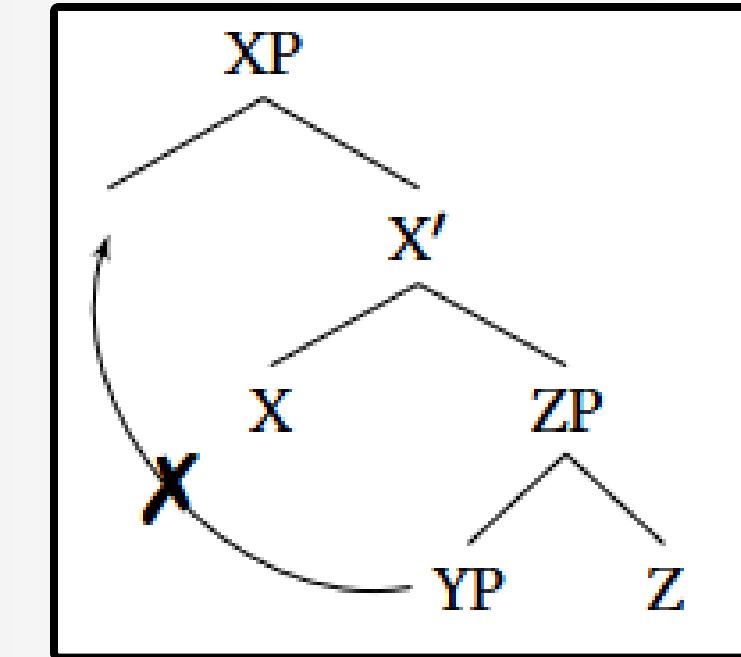


Let's Agree to Disagree

- Why not a **split-Agree** analysis?
 - Maybe too powerful? There's a lot going on in the “narrow” syntax
 - Do we need both Agree *and* Merge?
 - Does not add up with the facts! (Stay tuned...)

What about Anti-locality?

- Complementizer-trace effects result from Spec-to-Spec Anti-Locality (Erlewine 2020)
- Generalized Spec-to-Spec Antilocality (Deal 2019)
 - Movement of a phrase from SpecXP **must cross a maximal projection other than XP**



Is *ki* a composite probe?

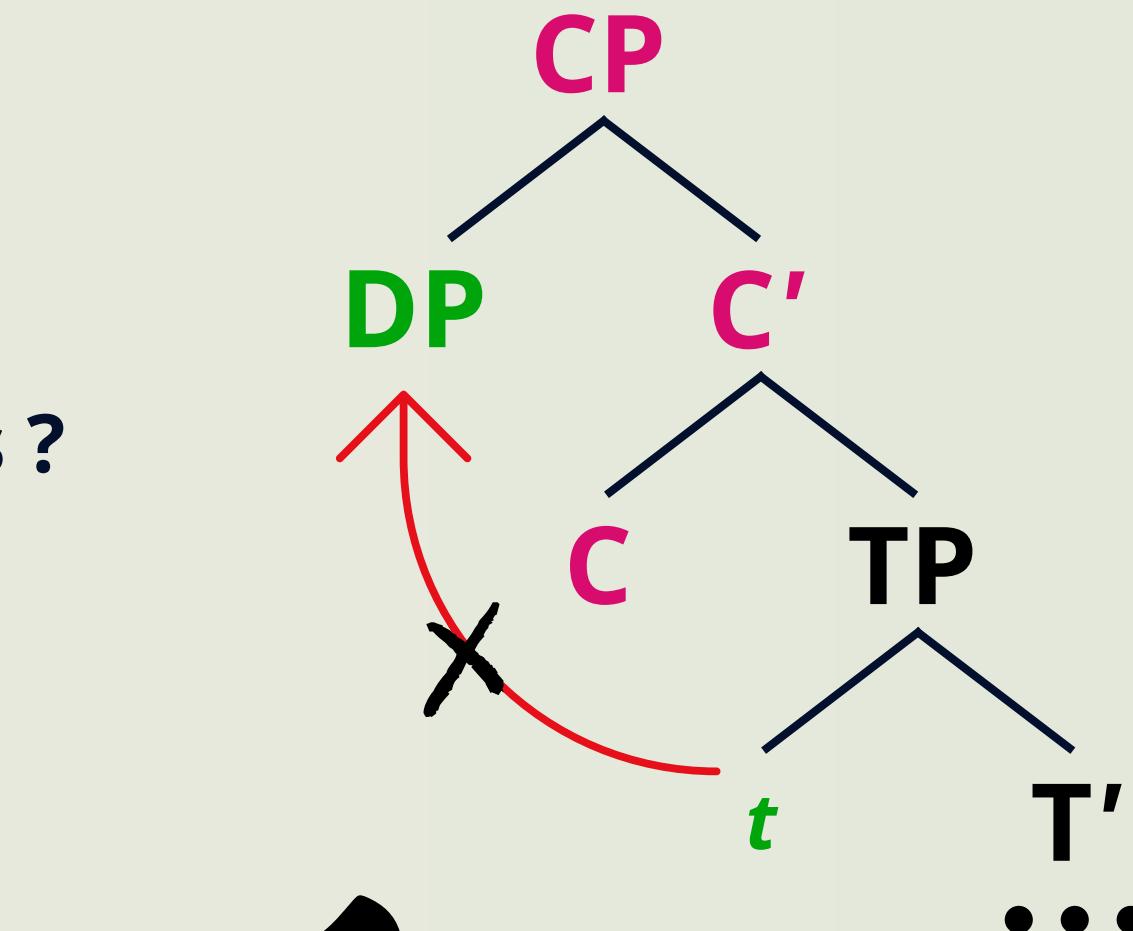
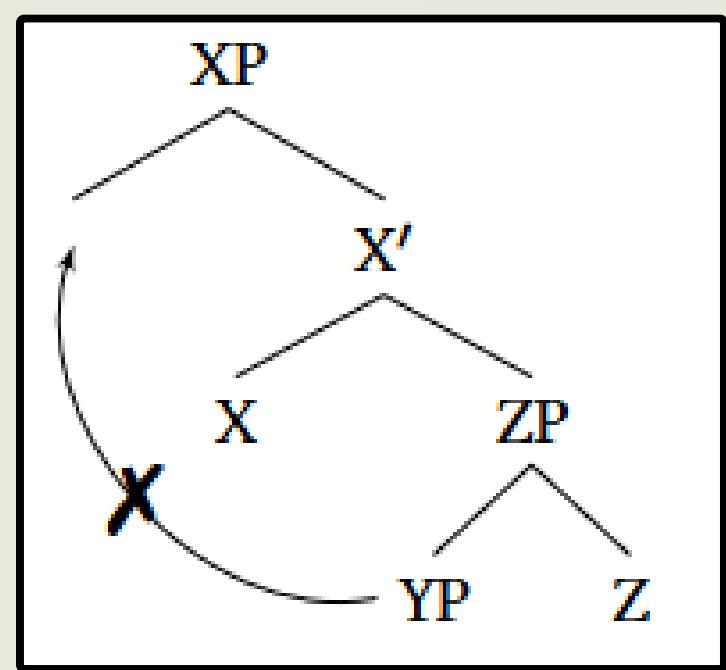
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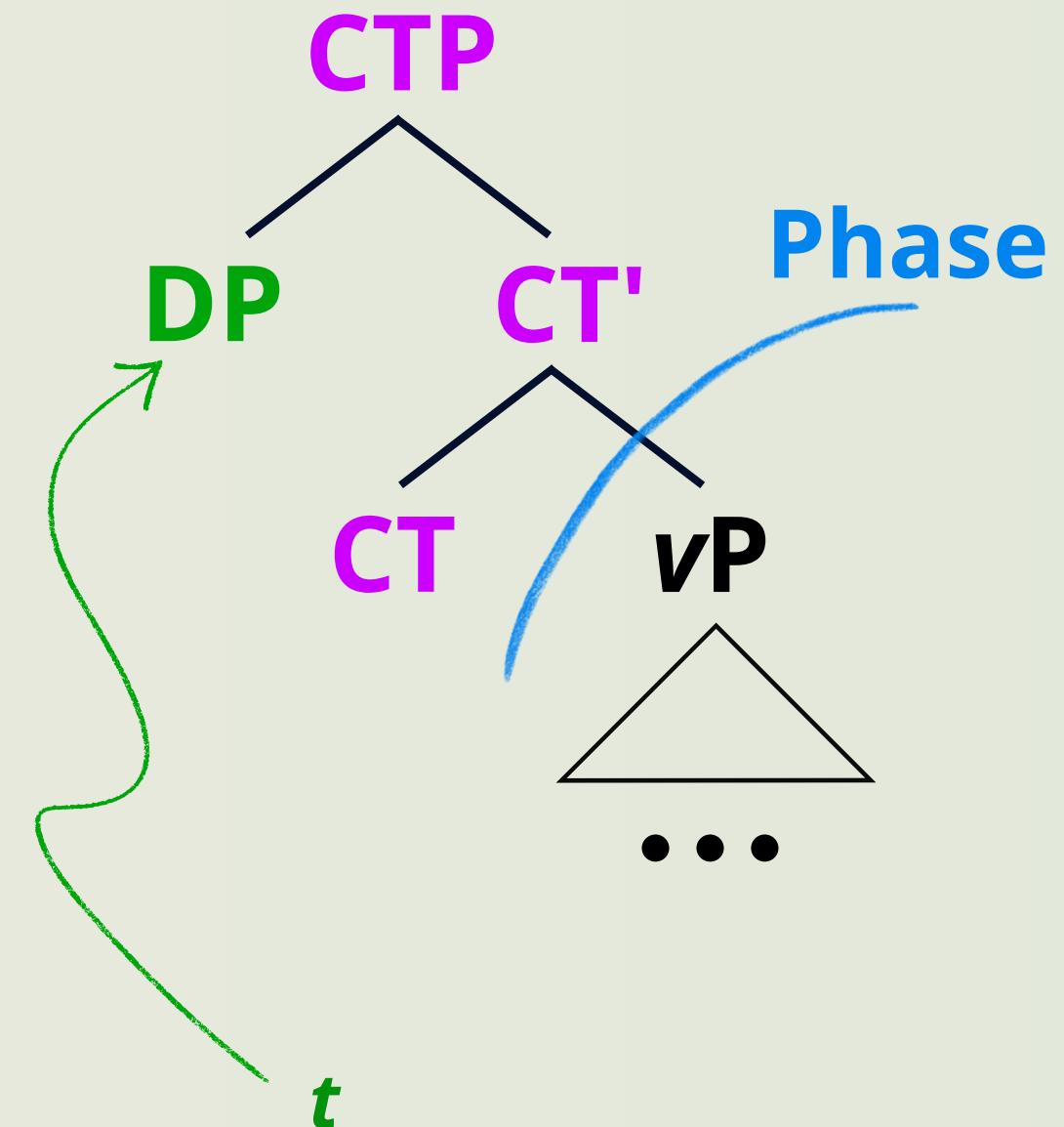
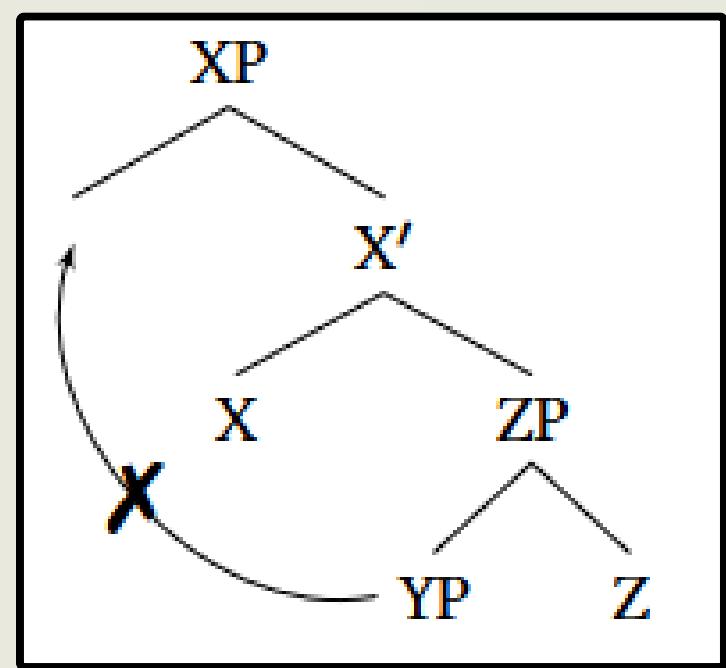
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Who COMP PST see Malis

Who saw Malis?

Qui (est-ce qui) a vu Malis ?



NEUTRALIZING *ki/ke*

A minimal pair for your consideration . . .

- (5) a. PP Extraction leads to *ki*

Se nan kont la ki rete Malis \$50
it.is in account the COMP left Malis \$50

Malis has \$50 left IN THE ACCOUNT.

- b. PP Extraction leads to *ke*

Se nan kont la (ke) Malis rete \$50
it.is in account the COMP Malis left \$50

Malis has \$50 left IN THE ACCOUNT.

NEUTRALIZING *ki/ke*

Null Subject Construction in HC

- (6) *te gen yon chat anba tab la*
PST have a cat under table the
There was a cat under the table.

- (7) *te manke m \$50 pou m ta ka achte sa*
PST miss 1.SG \$50 for 1.SG IRR can buy DEM
I was missing \$50 for me to be able to buy this.

NEUTRALIZING *ki/ke*

A minimal pair for your consideration . . .

- (8) a. LocP Extraction leads to *ki*

Se la ki te gen jan de moun sa-yo
it.is there COMP PST have type of people DEM-PL
There were those type of people THERE.

- b. LocP Extraction leads to *ke*

Se la (ke) jan de moun sa-yo te ye
it.is there COMP type of people DEM-PL PST COP
Those kinds of people were THERE.

NEUTRALIZING *ki/ke*

A minimal pair for your consideration . . .

- (9) a. VP Extraction leads to *ki*

Se manke ki te manke Malis \$50

it.is miss COMP PST miss Malis \$50

Malis IS MISSING \$50.

- b. VP Extraction leads to *ke*

Se manke (ke) Malis te manke \$50

it.is miss COMP Malis PST left \$50

Malis IS MISSING \$50.

NEUTRALIZING *ki/ke*

Takahashi and Gračanin-Yuksek 2008: 233

¹¹ As far as we know, there is no case in which the subject remains in situ in Haitian Creole.

Argument structure matters!



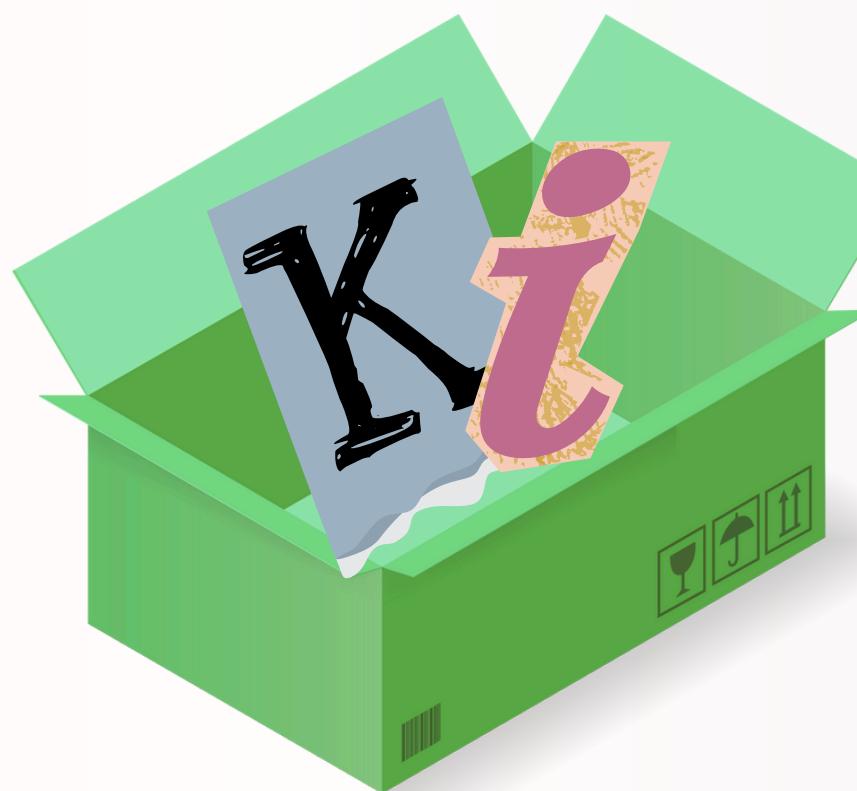
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Edge Constraints on Empty Categories

CHRISTOPHER LEGERME

Constraining Silent Elements at the Edge

- **Extended Projection Principle (EPP)**
- McFadden & Sundaresan (2018)
 - EPP and Comp-Trace are related



Glossa a journal of general linguistics

McFadden, Thomas and Sandhya Sundaresan. 2018. What the EPP and COMP-trace effects have in common: Constraining silent elements at the edge. *Glossa: a journal of general linguistics* 3(1): 43. 1–34, DOI: <https://doi.org/10.5334/gjgl.419>

RESEARCH

What the EPP and COMP-trace effects have in common: **Constraining silent elements at the edge**

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We focus here on the “classic” EPP, the requirement that certain subject positions be filled, and argue that characterizing it in terms of a syntactic movement-triggering feature is misguided. Specifically, we argue that, contrary to standard assumptions but along the lines of some recent proposals, the factors conditioning the EPP are actually not syntactic, but phonological. Nonetheless, the operations that it seems to trigger clearly are syntactic. Under common assumptions about the architecture of the grammar, the EPP thus seems to involve a violation of modularity or strict cyclicity. A novel approach to the EPP is thus required, which must simultaneously be able to handle its unique properties but must also be made to fit in with the broader grammatical architecture. We will argue that such an approach will not only allow a more satisfactory account of the EPP itself, but can also yield a unification with the COMP-trace effect and yield insight into how both of these interact with pro-drop.

Keywords: EPP; (anti-)that-trace effect; pro-drop; complementizers; prosody; phases; phasal domain; spellout; intonation phrase; syntax-PF interface

1 Overview

The status of the EPP is a long-standing puzzle for syntactic theory, which is reflected in the development of its various incarnations and implementations. It has undergone an evolution from a specific condition requiring a subject in each sentence (Chomsky 1981), to a more abstract feature used to ensure that a head projects a specifier (Chomsky 2001: and subsequent), and even to being a general movement trigger, driving head movement in addition to phrasal movement. This modern version of the EPP is arguably the formal feature par excellence, used purely to trigger syntactic operations, without being tied to any interface requirements. As such, it is also a thorn in the side of the Minimalist goal to have syntactic derivation be driven by interface concerns interacting with general princi-

- Spanish *is* a “pro-drop” language
 - Hablo español
- English *is not* a “pro-drop” language
 - *(Dan) mowed the lawn

- Spanish *is* a “pro-drop” language
 - Hablo español
- English *is not* a “pro-drop” language
 - *(Dan) mowed the lawn
- But not really helpful...

- Saying “English is not pro-drop” is a restatement, not an explanation.
 - Traditional classification fails to account for fine-grained variation in subject realization
 - Even English allows null arguments in some contexts (e.g., non-obligatory control or imperatives)
 - (i) *It's important to be careful when **PRO** crossing the street*
 - (ii) ***PRO* close the door!**

Null Subject Construction in HC

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There was a cat under the table.

(7) *te manke m \$50 pou m ta ka achte sa*

PST miss 1.SG \$50 for 1.SG IRR can buy DEM

I was missing \$50 for me to be able to buy this.

But HC is not “pro drop”

- (10) a. *Malis te vle kouri*
Malis PST want run
Malis wanted to run.

- b. **te vle kouri*
PST want run
He/She/They wanted to run.

- (11) a. *vè a kase*
glass the break
The cup is broken.

- b. **kase vè a*
break glass the
(The cup is broken.)

The EPP and Phonology

- The **EPP** has a phonological requirement: Spec-TP must be filled by an **overt element**.
 - If *pro* were syntactically present but phonologically silent, why must English and HC reject it?
 - Many syntactically active elements (e.g., C, T, v, D, P) may remain unpronounced – but never subject DPs in English.

- In English, the ***that*-trace effect** prohibits the extraction of an embedded subject when the complementizer *that* is overtly realized

(2) English *that*-trace effect (Perlmutter 1968: 214)

- a. Who did he say [CP (****that***) __ hid the rutabaga]?
- b. What did he say [CP (***that***) Laura hid __]?

Comp-Trace and Phonology

- Mounting evidence that comp-trace effects are not actually syntactic, as was long thought, but rather involve something phonological or prosodic (Kandybowicz 2006; Bruening 2009; McFadden 2012; Salzmann et al. 2013)
 - Different ways to ameliorate the affect (e.g., ellipsis or certain intonational breaks)
 - (i) *?Who does John doubt whether I and Bill suspect that I _cheated?*
 - (ii) *Who do you think that I against better judgment I punched Alex?*

According to McFadden and Sundaresan (2018), **the EPP can and should be unified with the comp-trace effect.**

Various constraints that refer to silent subject positions in specific contexts can only be unified via their reference to (non-)overtness, and thus the **unifying implementation must be situated at PF**.

The *Anti-That-Trace*

Intonational Phrase Edge Generalization (IPEG)

(An 2007 in McFadden and Sundaresan 2018: 10)

The edge of an IntP cannot be empty (where the notion of edge encompasses the specifier and the head of the relevant syntactic constituent).

The *Anti-That-Trace*

- McFadden and Sundaresan assume an architecture where prosodic structure is built up hierarchically and IntPs are constructed on top of prosodic words
 - But what matters is that ***somehow***, SpecTP finds itself “set off from any preceding material, and thus cannot be parsed into the same IntP as that material.” (2018: 10)

The *Anti-That-Trace*

Overt Subject Requirement (OSR)

(McFadden and Sundaresan 2018: 11)

Constraints against configurations with an empty subject position, ..., arise when the standard subject position in Spec-TP, as the left edge of the spellout domain of a CP phase, appears at the left edge of an Intonational Phrase, and thus must be overt to satisfy the IPEG.

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 - But what matters is that **somehow**, SpecTP finds itself “set off from any preceding material, and thus cannot be parsed into the same IntP as that material.” (2018: 10)
- **The OSR is not about the subject per se**
 - We’re not saying that SpecTP needs to be filled in the narrow syntax, “but that there [needs to] be **overt material** in a **certain position at PF**.”
 - A silent pronoun cannot satisfy the OSR

The *Anti-That-Trace*

- (12) a. I saw **the child** [**who/that** [**Mary** was waiting for _]]
- b. I saw **the child** [**Ø** [**Mary** was waiting for _]]

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- (12) a. I saw **the child** [**who/that** [**Mary** was waiting for _]]
- b. I saw **the child** [**Ø** [**Mary** was waiting for _]]
- (13) a. I saw **the child yesterday** [(**who/that** [**Mary** was waiting for _])
- b. *I saw **the child yesterday** [(**Ø** [**Mary** was waiting for _])]

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(= IntP Boundary

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OSR is not a 1-1 correspondence with the syntax

The *Anti-That-Trace*

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This is basically Haitian Creole *ke*

The *Anti-That-Trace*

- (14) a. I saw the child [who/that [_ was waiting for Mary]]
b. *I saw the child [Ø [_ was waiting for Mary]]

The *Anti-That-Trace*

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The *Anti-That-Trace*

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This is obligatory *ki* in Haitian Creole

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- (15) a. I saw the child yesterday [(who/that [_ was waiting for Mary]]
b. *I saw the child yesterday [(Ø [_ was waiting for Mary]]

This is obligatory *ki* in Haitian Creole
possibly **without** the subject gap!

The *Anti-That-Trace*

IntP Extension

(McFadden and Sundaresan 2018: 20)

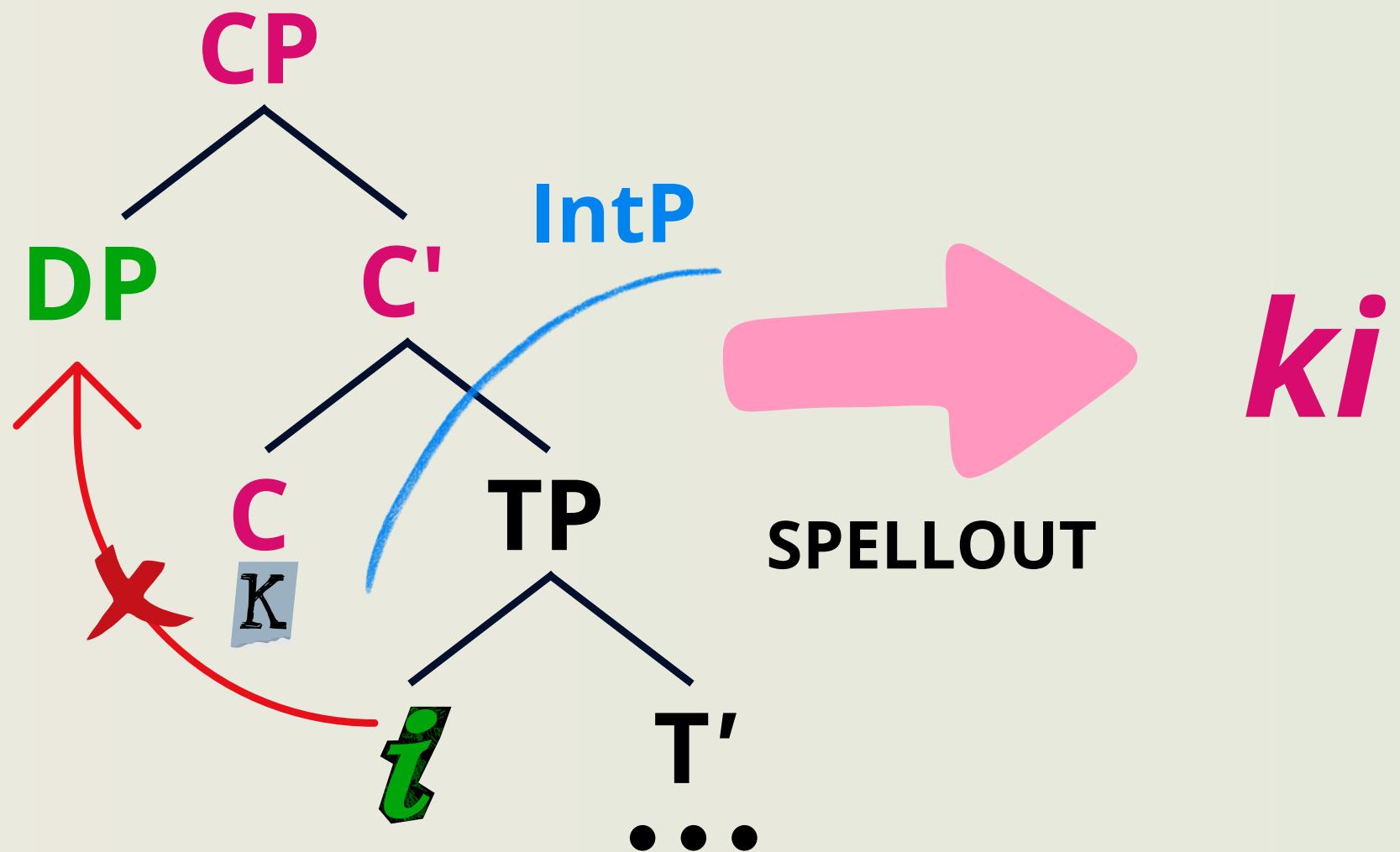
*Given a syntactic constituent XP that would normally be aligned with an IntP boundary by the categorial route, if an element **moves from the edge of XP into a constituent YP which contains XP**, the IntP will be aligned with YP instead.*

The *Anti-That-Trace*

- (16) a. (Se) **Kiyes ye swa [(ki te achte Machin sa-a)]**
b. (Se) **Kiyes (*ke) ye swa [(*Ø/*ke) te achte Machin sa-a)]**
- (17) a. (Se) **Kisa (*ke) ye swa [(ke) [(Malis te achte _)]]**
b. (Se) **Rete (*ki) ye swa [(ki te rete (??Malis) \$50 nan kont la)]**

**But no IntP Extension in Haitian Creole
unless *ki* is actually bimorphemic**

My Analysis



(18) a. *(Eske) Malis te pati?*

Q.COMP Malis PST left

Was it Malis that left?

b. *Malis (*eske) _ te pati?*

Malis Q.COMP PST left

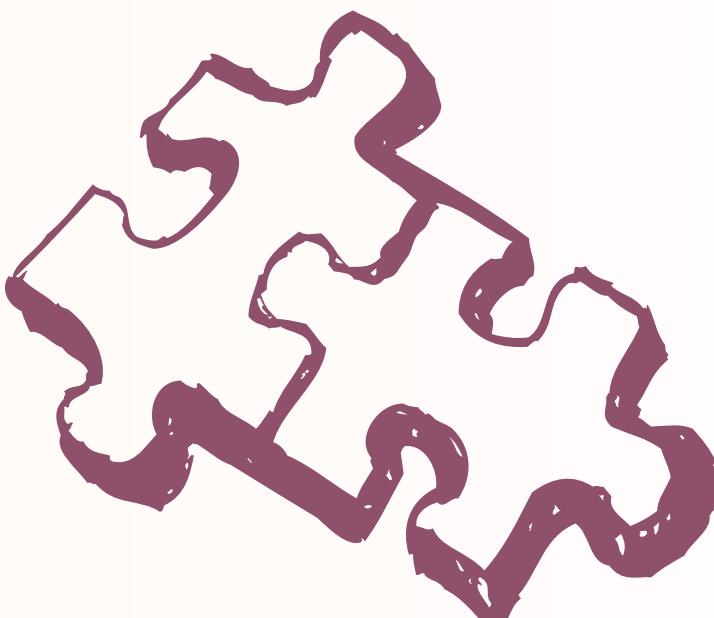
(Intended: Was it Malis that left?)

c. *Malis (*eske) Bouki te we?*

Malis Q.COMP Bouki PST see

(Intended: Was it Malis (that) Bouki saw?)

“ *The comp-trace effect comes down to two mutually incompatible requirements. The overt complementizer ensures that its TP complement will be parsed as an IntP, but the subject trace ensures that this TP will have an empty edge.*



McFadden and Sundaresan 2018: 333

Loose Ends

- What is **i**, and where does it come from? (Movement? Or, base generated in SpecTP?)
- How is **i** interpreted at the interfaces?
- Why doesn't **i** show up more regularly (e.g., in null subject declarative sentences)?

(19) *te gen yon chat anba tab la*
PST have a cat under table the
There was a cat under the table.

Loose Ends

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- How is **i** interpreted at the interfaces?
- Why doesn't **i** show up more regularly (e.g., in null subject declarative sentences, nor with weather predicates)?

(20) *(Li) te fè lapli*
3.SG PST make rain
(It) was raining.

Recap

- *ki does not behave like a classic that-trace*
 - It is overt, not null
 - More like an anti-that-trace

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Recap

- *ki does not behave like a classic that-trace*
 - It is overt, not null
 - More like an anti-that-trace
- Previous analyses don't work
 - *ki* is compatible with non-subjects
- *ki/ke is more than just syntax*
 - Influenced by both syntactic and prosodic factors
 - EPP replaced by OSR in the phonology

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Thank-you!